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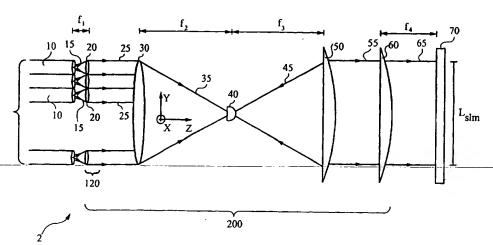
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(54) Title: AN ILLUMINATION SYSTEM FOR ONE-DIMENSIONAL SPATIAL LIGHT MODULATORS EMPLOYING MULTIPLE LIGHT SOURCES



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(57) Abstract: The present invention is directed to illuminating a one-dimensional spatial light modulator (70) using an illumination system employing multiple light sources (10). The illumination system comprises a parallel array of light sources which provides a plurality of light outputs to an optical train (200). The optical train effectively combines the light sources into a single light source. The single light source provides a single light output for uniformly illuminating the spatial light modulator. The optical train includes a first optical train for receiving the light outputs from each light source, magnifying each light output, and overlaying each of the light outputs to form a single real magnified image. A mode conversion lens receives the single real magnified image, converts a mode profile of the single real magnified image into a top hat mode profile, and outputs a diverging light beam with a top hat mode profile. A second optical train shapes the light beam into an appropriate spatial geometry in such a manner that the light beam effectively illuminates the entire spatial light modulator, and directs the light beam onto the spatial modulator.

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B. FIELDS SEARCHED

 $\begin{array}{ll} \mbox{Minimum documentation searched (classification system followed by classification symbols)} \\ \mbox{IPC 7} & \mbox{G02B} & \mbox{B41J} & \mbox{G02F} \end{array}$

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

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X	EP 1 040 927 A (EASTMAN KODAK CO 4 October 2000 (2000-10-04) page 3, line 16 - line 23 page 4, line 5 - line 35; figure		1-3
X	EP 1 003 071 A (EASTMAN KODAK CO 24 May 2000 (2000-05-24) column 8; figure 1A		1,3,13, 18,22
X Furth	er documents are listed in the continuation of box C.	X Patent family members are listed	in annex.
A docume consid *E* earlier d -filing d *L* docume which i citation *O* docume other n *P* docume	nt which may throw doubts on priority claim(s) or s cited to establish the publication date of another or other special reason (as specified) int referring to an oral disclosure, use, exhibition or	*T* later document published after the inte or priority date and not in conflict with cited to understand the principle or the invention *X* document of particular relevance; the cannot be considered novel or cannot involve an inventive step when the document of particular relevance; the cannot be considered to involve an involve an inventis combined with one or moments, such combination being obvious in the art. *&* document member of the same patent	the application but converted invention be considered to coment is taken alone laimed invention ventive step when the re other such docupis to a person skilled
Date of the a	actual completion of the international search	Date of malling of the international sea	arch report
2!	November 2002	02/12/2002	
Name and n	nailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Von Moers, F	

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